

Amendments to the Specification

Please replace paragraph [0017] with the following amended paragraph:

[0017] At the bottom of piston **60** as shown, the main elastomeric O-ring seat **62** is secured in place by retaining plate **61**. The latter plate is held in place by bolt **61A**, which is tightened into a threaded hole in the piston. A locking thread insert **61B** within the threaded hole in piston **60** provides resistance to vibration and loosening torque in order to keep bolt **61A** secure and tight. Leak-tight closure of piston **60** is provided by the interference fit (squeeze) between seat **62** and metallic nozzle surface **64**, the latter having a raised portion to directly impinge on the seat. Nozzle surface **64** is composed of stainless steel, either through application of a corrosion-resistant weld overlay to the surface of the casting, if the casting is made of carbon steel, or by virtue of it having been machined directly into the casting material if a stainless steel casting is used.

Please replace paragraph [0023] with the following amended paragraph:

[0023] The value of dome gas pressure that corresponds to a specified set pressure is a function of the ratio of main valve seat or nozzle area to piston seal area for the valve size in question. Each surge relief valve size has a characteristic area ratio, which can be calculated directly from the machining dimensions of nozzle surface **64** and liner **58**. For example, in a 3" by 4" main valve with a nozzle diameter of 3.05 inches and liner inside diameter of 3.50 inches, the seat-to-seal area ratio equals 0.76; for a specified valve set pressure of 500 pounds per square inch (psi), the corresponding dome gas pressure would equal $(0.76) \times (500)$ or 380 psi. Establishment of correct dome pressure will, as set pressure is reached, result in zero net force acting on the piston when considering the dome gas acting downward on the piston and system fluid acting in an upward direction.